

Power Mac G5

Technical Specifications



Start your next project on the ultimate creative platform. Whether you choose one of the dual-core configurations or the groundbreaking quad-core Power Mac G5 Quad, you'll benefit from PCI Express expansion options, the latest graphics cards, and a host of built-in capabilities — like SuperDrive, dual Gigabit Ethernet, and plenty of ports for connecting FireWire, USB, and audio devices.

Power Mac G5 Info

 [Power Mac G5 Technology Overview](#)

 [Design for the Environment](#)



A 64-Bit OS for Your 64-Bit Machine

Every Power Mac G5 comes with Tiger, the latest release of [Mac OS X](#). Search your entire Power Mac in a single click with [Spotlight](#). Access up-to-the-second information with [Dashboard](#). Automate complex or repetitive tasks and streamline your workflow using [Automator](#) — no programming required. And with its [64-bit features](#), Tiger provides access to as much physical memory as you can install in your Power Mac G5, up to 16GB. In fact, your transition to 64-bit performance is seamless: Current 32-bit code — such as the Mac OS 9 Classic environment and existing applications — runs natively at processor speed. With no interruptions to your workflow. And no additional investment in software required to take advantage of 64-bit power, period.

Configurations	Power Mac G5 Dual 2GHz	Power Mac G5 Dual 2.3GHz	Power Mac G5 Quad 2.5GHz
Model	M9590LL/A	M9591LL/A	M9592LL/A
Processor	Dual-core 2GHz PowerPC G5	Dual-core 2.3GHz PowerPC G5	Two dual-core 2.5GHz PowerPC G5
L2 cache	1MB per core		
Frontside bus	1GHz	1.15GHz	1.25GHz per processor
Main memory	512MB of 533MHz DDR2 SDRAM (PC2-4200); supports up to 16GB		
Standard graphics	NVIDIA GeForce 6600 LE with 128MB of GDDR SDRAM, one single-link DVI port, and one dual-link DVI port	NVIDIA GeForce 6600 with 256MB of GDDR SDRAM, one single-link DVI port, and one dual-link DVI port	

Optional graphics	NVIDIA GeForce 7800 GT with 256MB of GDDR3 SDRAM, one single-link DVI port, and one dual-link DVI port; or NVIDIA Quadro FX 4500 with 512MB of GDDR3 SDRAM, two dual-link DVI ports, and one stereo 3D port (occupies PCI Express 16-lane slot and adjacent four-lane slot)	
Hard drive⁽¹⁾	160GB Serial ATA; 7200 rpm	250GB Serial ATA; 7200 rpm
Optical drive	16x SuperDrive with double-layer support (DVD+R DL/DVD±RW/CD-RW)	
Expansion	Three open PCI Express expansion slots: two four-lane slots and one eight-lane slot	
Ports and Bays	One FireWire 800 port, two FireWire 400 ports (one on front), four USB 2.0 ports (one on front), two USB 1.1 ports (on keyboard), two internal hard drive bays (one occupied)	
Audio	Optical digital audio input, optical digital audio output, analog line-level input, analog line-level output, front headphone minijack and speaker	
Networking	Dual 10/100/1000BASE-T (Gigabit) Ethernet ports; integrated wireless antenna; optional AirPort Extreme and Bluetooth 2.0 + EDR (build-to-order option or through an Apple Authorized Service Provider)	
Software	Mac OS X, Spotlight, Dashboard, Mail, iChat AV, Safari, Address Book, QuickTime, iLife (includes iTunes, iPhoto, iMovie HD, iDVD, and GarageBand), iCal, DVD Player, Classic environment, Art Directors Toolkit X, FileMaker Pro Trial, GraphicConverter, Microsoft Office 2004 for Mac Test Drive, OmniGraffle, OmniOutliner, QuickBooks New User Edition, Zinio Reader, Xcode Development Tools	
Hardware accessories	Apple Keyboard, Mighty Mouse, USB keyboard extension cable, DVI to VGA adapter	
Limited warranty and service	Your Power Mac G5 comes with 90 days of telephone support and a one-year limited warranty. Purchase the AppleCare Protection Plan to extend your service and support to three full years. Only the AppleCare Protection Plan provides you with direct telephone support from Apple technical experts and the assurance that repairs will be handled by Apple-certified technicians using genuine Apple parts. For more information, visit Apple support or call 800-823-2775.	

Build-to-Order Options	Order a custom-configured Power Mac G5 from the online Apple Store or an authorized Apple reseller.	
Memory	PC2-4200 DDR2 SDRAM (NECC) installed in pairs: 512MB, 1GB, 2GB, 4GB, 8GB, or 16GB; 1GB or more available in choice of ECC or NECC	
Graphics	<ul style="list-style-type: none"> • NVIDIA GeForce 6600 LE with 128MB of GDDR SDRAM • NVIDIA GeForce 6600 with 256MB of GDDR SDRAM • NVIDIA GeForce 7800 GT with 256MB of GDDR3 SDRAM • NVIDIA Quadro FX 4500 with 512MB of GDDR3 SDRAM (occupies 16-lane PCI Express slot and adjacent four-lane PCI Express slot) 	
Hard drives⁽¹⁾	<ul style="list-style-type: none"> • 160GB Serial ATA • 250GB Serial ATA • One or two 500GB Serial ATA 	
Displays	<ul style="list-style-type: none"> • 20-inch Apple Cinema Display M9177LL/A • 23-inch Apple Cinema HD Display M9178LL/A • 30-inch Apple Cinema HD Display M9179LL/A 	
Audio	<ul style="list-style-type: none"> • Apple iPod • Logitech Z-5500 5.1 THX Speaker System TB825LL/A • Monster 1m Toslink Digital Fiber Optic Cable T7153LL/A • Monster 2m Toslink Digital Fiber Optic Cable T7154LL/A 	
External storage	<ul style="list-style-type: none"> • Xserve RAID • Apple Fibre Channel PCI Express Card MA139G/A 	
Wireless	<ul style="list-style-type: none"> • AirPort Extreme and Bluetooth technologies • AirPort Extreme Base Station M8799LL/A • AirPort Express Base Station Featuring AirTunes M9470LL/A • Apple Wireless Keyboard M9270LL/A⁽²⁾ • Apple Wireless Mouse M9269Z/A⁽²⁾ 	
Services	<ul style="list-style-type: none"> • AppleCare Protection Plan M8850LL/A • .Mac Subscription MA175Z/A 	

Technical Specifications

Processing

Graphics and displays

Communications

- Single 2GHz, single 2.3GHz, or dual 2.5GHz dual-core PowerPC G5 microprocessors
- PowerPC processor architecture with 64-bit data paths and registers; each core includes:
 - 1MB on-chip L2 cache running at processor speed (total 2MB per processor)
 - Parallel data structure supporting up to 215 simultaneous in-flight instructions
 - Simultaneous issue of up to 10 out-of-order operations
 - Dual-pipeline Velocity Engine for 128-bit single-instruction, multiple-data (SIMD) processing
 - Two independent double-precision floating-point units
 - Advanced three-component branch prediction logic
- Native support for 32-bit application code
- Single 1GHz, single 1.15GHz, or dual 1.25GHz 64-bit DDR bidirectional frontside buses
- Point-to-point system controller

Memory

- 128-bit memory controller and data paths
 - 512MB of 533MHz DDR2 SDRAM (PC2-4200)
 - Eight DIMM slots supporting up to 16GB of main memory
- Support for the following DIMMs (in pairs):
 - 256MB DIMMs (64-bit-wide, 512-Mbit)
 - 512MB DIMMs (64-bit-wide, 512-Mbit)
 - 1GB DIMMs (64-bit-wide, 512-Mbit or 1-Gbit)
 - 2GB DIMMs (64-bit-wide, 1-Gbit)
- ECC memory available in configurations with 1GB or more (build-to-order option)

PCI Express expansion

- Two open full-length four-lane PCI Express slots
- One open full-length eight-lane PCI Express slot
- PCI Express cards of any size supported in all slots

- 16-lane PCI Express graphics slot with one of the following graphics cards installed:
 - NVIDIA GeForce 6600 LE with 128MB of GDDR SDRAM, one single-link DVI port, and one dual-link DVI port
 - NVIDIA GeForce 6600 with 256MB of GDDR SDRAM, one single-link DVI port, and one dual-link DVI port
 - NVIDIA GeForce 7800 GT with 256MB of GDDR3 SDRAM, one single-link DVI port, and one dual-link DVI port (build-to-order option)
 - NVIDIA Quadro FX 4500 with 512MB of GDDR3 SDRAM, two dual-link DVI ports, and one stereo 3D port (build-to-order option; occupies 16-lane PCI Express slot and adjacent PCI Express slot)

- Support for graphics cards that require up to 150W
- Support for digital resolutions up to 1920 by 1200 pixels; dual-link DVI ports support up to 2560 by 1600 pixels
- Support for analog resolutions up to 2048 by 1536 pixels
- DVI to VGA Adapter included
- Dual-display support for extended desktop and video mirroring modes
- Support for up to two Apple flat-panel displays for each graphics card installed

Storage

- Two 3.5-inch hard drive bays, each with a 150-Mbps Serial ATA controller; one of the following is installed:
 - One 160GB 7200-rpm Serial ATA; 8MB memory buffer⁽¹⁾
 - One 250GB 7200-rpm Serial ATA; 8MB memory buffer ⁽¹⁾
 - One or two 500GB 7200-rpm Serial ATA; 16MB memory buffer (build-to-order option)⁽¹⁾
- 16x SuperDrive with double-layer support (DVD+R DL/DVD±RW/CD-RW); writes DVD-R discs at up to 16x speed, writes DVD+R DL discs at up to 6x speed, reads DVDs at up to 16x speed, writes CD-R and CD-RW discs at up to 24x speed, reads CDs at up to 32x speed

- Two independent 10/100/1000BASE-T Ethernet (RJ-45) interfaces with support for jumbo frames
- Optional AirPort Extreme and Bluetooth 2.0 (build-to-order option or installed by Apple Authorized Service Provider)
 - AirPort Extreme: Based on IEEE 802.11g standard and Wi-Fi Certified for 802.11g and 802.11b interoperability⁽³⁾
 - Bluetooth: Support for Enhanced Data Rate, or data rates up to 3 Mbps
- Optional external Apple USB Modem (RJ-11)⁽⁴⁾
- Integrated wireless antenna

Peripherals and audio

- One FireWire 800 port and two FireWire 400 ports (one on front panel, 15W total power)
- Four USB 2.0 ports (one on front panel), two USB 1.1 ports on included keyboard
- Front headphone minijack and speaker
- Optical digital audio input and output Toslink connectors
- Stereo analog line level input and line level output minijacks

Electrical and environmental requirements

- Meets ENERGY STAR requirements
- Line voltage: 100 - 125V AC or 200 - 240V AC (wide-range power supply input voltage)
- Frequency: 50Hz to 60Hz, single phase
- Maximum current: At least 10A (low-voltage range) or 5A (high-voltage range)
- Operating temperature: 50° to 95° F (10° to 35° C)
- Storage temperature: -40° to 149° F (-40° to 65° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 feet

Size and weight

- Height: 20.1 inches (51.1 cm)
- Width: 8.1 inches (20.6 cm)
- Depth: 18.7 inches (47.5 cm)
- Weight (standard configurations): 44.5 to 48.8 pounds (20.2 to 22.1 kg) ⁽⁵⁾

1. 1GB = 1 billion bytes and 1TB = 1 trillion bytes; actual formatted capacity less.

2. The Apple Wireless Keyboard and Mouse require Bluetooth technology.

3. Actual rates will vary.

4. Wireless Internet access requires AirPort Extreme technology, a base station or other wireless access point, and Internet access (fees may apply). Achieving data rates up to 54 Mbps requires that all users have an 802.11g-enabled computer and connect to an 802.11g wireless access point. Some ISPs are not compatible with AirPort. Streaming music requires a compatible stereo system or powered speakers. Range may vary with site conditions.

5. Weight varies by configuration and manufacturing process.

• Internet access requires a compatible Internet service provider; fees may apply. Product contains electronic documentation. Backup copy of software is included.